CLAIMS

1. A method in an access network for preventing hosts (5; A, B) connected to the access network from communicating directly with each other, said access network comprising an access router (1; 11; 11'; 11''; 81) and one or more switches (3; 12; 12'; 35, 36, 37; 83) wherein said hosts being in communication contact with said access router via said switches, said method comprising the steps of:

- defining Virtual Local Area Networks, VLANs, in the switches such that traffic arriving into the switches from said hosts is forced to the access router and
- defining in the switches one downlink VLAN being asymmetric and carrying downlink traffic from the access router to said hosts, said downlink VLAN being common to said hosts connected to the access network,

characterised by the further steps of:

- configuring the VLANs such that said hosts connected to the access network belong to the same IP subnet and
- configuring the access router to be an Address Resolution Protocol proxy and to perform intra-subnet routing.

2. A method according to claim 1, wherein said hosts comprise all hosts connected to said access network.

3. A method according to claim 1 or 2, **characterised by** defining in the switches (3; 12; 12'; 35, 36, 37) one uplink VLAN being asymmetric and carrying uplink traffic from said hosts (5; A, B) to the access router (1; 11; 11'; 11''), said uplink VLAN being common to said hosts connected to the access network.

4. A method according to claim 1 or 2, **characterised by** defining in the switches (83) in a fixed access network one uplink VLAN for each of said hosts or for each of one or more groups of said hosts, said uplink VLANs being used for only uplink traffic from said hosts to the access router (81).

5. A method according to claim 1 or 2, **characterised by** defining in the switches (83) in a fixed access network one uplink VLAN for each of said hosts or for each of one or more groups of said hosts, said uplink VLANs being used for uplink traffic from said hosts to the access router (81) and further defining said uplink VLANs to also transfer downlink unicast traffic from the access router to the hosts.

6. A method according to claim 1 or 2, **characterised by** defining in the switches (83) in a WLAN access network one uplink VLAN for each Access Point, AP, (85, 86) or for each of one or more groups of APs, said uplink VLANs being used for uplink traffic from the APs and the hosts connected to the APs to the access router (81).

7. A method according to claim 3 or 6, **characterised by** configuring Access Points, APs, (14) in a WLAN to prevent hosts (A, B) connected to the same AP (14) from communicating directly with each other through the AP by extending the downlink VLAN and the uplink VLAN to incorporate the AP or by utilising the inherent configuration abilities of the AP.

8. A method according to any one of the claims 4-7, **characterised by** providing in the switches (83) the frames sent from the hosts (A, B) to the access router (81) with VLAN tags and configuring the access router (81) to be VLAN aware.

9. A method according to any one of the preceding claims, **characterised by** configuring the VLANs as shared VLANs.

10. A method according to any one of the preceding claims, **characterised by** retrieving by the access router (1; 11; 11'; 11''; 81) address mapping information for the hosts (5; A, B) during the user authentication procedure.

11. A method according to any one of the preceding claims, **characterised by** retrieving by the access router (1; 11; 11'; 11''; 81) address mapping information for the hosts (5; A, B) during the IP allocation procedure.

12. A method according to any one of the preceding claims, **characterised by** providing more than one access router in the access network, the VLANs being configured such that the access routers belong to the same VLANs.

13. An arrangement in an access network, said arrangement comprising an access router (1; 11; 11'; 11''; 81), one or more switches (3; 12; 12'; 35, 36, 37; 83) connected to the access router and one or more hosts (5; A, B) being in communication contact with said access router through said switches, wherein said arrangement is adapted to prevent said hosts from communicating directly with each other, said switches being configured to define Virtual Local Area Networks, VLANs, such that traffic arriving into the switches from said hosts is forced to proceed to said access router, the switches further being configured to define one downlink VLAN being asymmetric and carrying downlink traffic from the access router to said hosts, said downlink VLAN being common to said hosts connected to the access network **characterised in that** the VLANs are configured such that said hosts belong to the same IP subnet and **in that** the access router is configured to be an Address Resolution Protocol proxy and to perform intra-subnet routing.

14. An arrangement according to claim 13, **characterised in that** said hosts comprise all hosts connected to the access network.

15. An arrangement according to claim 13 or 14, **characterised in that** the switches (3; 12; 12'; 35, 36, 37) are configured to define one uplink VLAN being asymmetric and carrying uplink traffic from the hosts (5; A, B) to the access router (1; 11; 11'; 11''), said uplink VLAN being common to said hosts.

16. An arrangement according to claim 13 or 14, **characterised in that** the switches (83) in a fixed access network are configured to define one uplink VLAN for each of said hosts or for each of one or more groups of said hosts, said uplink VLANs being

asymmetric and used for uplink traffic from said hosts (5; A, B) to the access router (81).

17. An arrangement according to claim 13 or 14, **characterised in that** the switches (83) in a fixed access network are configured to define one uplink VLAN for each of said hosts or for each of one or more groups of said hosts, said uplink VLANs being used for uplink traffic from said hosts to the access router (81) and for downlink unicast traffic from the access router to the hosts.

18. An arrangement according to claim 13 or 14, **characterised in that** the switches (83) in a WLAN access network are configured to define one uplink VLAN for each Access Point, AP, (85, 86) or for each of one or more groups of APs, said uplink VLANs being used for uplink traffic from the APs to the access router (81).

19. An arrangement according to any one of the claims 16-18, **characterised in that** the access router (81) is configured to be VLAN aware and in that the switches (83) are adapted to provide the frames sent from the hosts (A, B) to the access router (81) with VLAN tags.

20. An arrangement according to any one of the claims 13-19, **characterised in that** the switches (3; 12; 12'; 35, 36, 37; 83) are adapted to configure the VLANs as shared VLANs.

21. An arrangement according to any one of the claims 13-20, **characterised in that** the access router (1; 11; 11'; 11''; 81) is adapted to retrieve address mapping information for the hosts (5; A, B) during the user authentication procedure.

22. An arrangement according to any one of the claims 13-21, **characterised in that** the access router (1; 11; 11'; 11''; 81) is adapted to retrieve address mapping information for the hosts (5; A, B) during the IP allocation procedure.

23. An arrangement according to any one of the claims 13-22, **characterised in that** more than one access router are provided in the system, the VLANs being configured in the switches such that the access routers belong to the same VLANs.

24. An access router in an arrangement according to any one of the claims 13-23.

25. A switch in an arrangement according to any one of the claims 13-23.